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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Malcolm M Smith

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EXAMINER

JAGANNATHAN, MELANIE

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,912

Applicant(s)

SMITH, MALCOLM M

Examiner

Melanie Jagannathan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/25/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 31-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Penners et al. US 5,793,762.

Regarding claims 31, 37, the claimed detecting at a base station transceiver, that a mobile station has entered a geographic area associated with base transceiver station is disclosed by mobile host registration sends DRPC registration message to RPC (Figure 1, element 20) each RPC equipped with foreign agent functionality (element 28). See column 5, lines 35-50, column 7, lines 34-60. The claimed determining a home agent for mobile unit based on device identifier such as MIN or ESN is disclosed by database (Figure 2, element 40) storing a list of universal personal telephone numbers of subscribers and also functions to map UPT with corresponding HLR which stores subscription data pertaining to mobile host registration. See column 4, lines 7-13, column 6, lines 39-47, column 8, lines 9-14. The claimed requesting subscription information from home agent, wherein the subscription information comprises an Internet address for the mobile unit is disclosed by RPC has HLR validate user and sends confirmation with user service profile back to new VLR. See column 8, lines 19-37, column 11, lines 3-29. The claimed initiating by base transceiver station, registration of foreign agent with the home

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agent, wherein the foreign agent is associated with foreign network and wherein the registration permits the foreign agent to receive redirect packets from home agent is disclosed by VLR informs RPC/FA about mobile host and provides information such that FA can register with HA. Examiner interprets this as RPC (base station) initiating registration of FA with HA using its own foreign agent functionality. See column 11, lines 17-29.

Regarding claim 32, the claimed receiving redirect packets in advance of establishing data-link layer connection with mobile unit to support a substantially seamless handoff is disclosed by registration of user when they roam from one area to another before packets are communicated so as to have foreign agent receive packets from home agent for transmission to mobile host to provide handover functionality. See column 4, lines 36-45, column 6, lines 28-38, column 8, lines 19-37, column 9, lines 41-67, column 10, lines 1-25.

Regarding claim 33, the claimed IP address of mobile unit specifies network identifier identical to that specified by an IP address of home agent is disclosed by packets sent to mobile host from correspondent host are delivered to mobile host's home network based on Internet address where home agent resides. See column 9, lines 61-67, column 10, lines 1-6.

Regarding claim 34, the claimed generating, with base transceiver station, a registration request comprising IP address of mobile unit and IP address of foreign agent and transmitting registration request to home agent is disclosed by when user roams from one registration area to another, mobile terminal sends a registration request including Internet address of foreign agent to new RPC which sends this request to the associated VLR. VLR sends request to HLR which stores subscription information for keeping track of where mobile terminals are registered and sends service profile back to VLR which informs RPC/FA of information to facilitate

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registration of FA with HA. See Figures 7 and 8 and column 6, lines 28-43, column 9, lines 41-60, column 11, lines 3-28.

Regarding claim 35, the claimed redirect packets addressed to IP address of foreign agent and each of redirect packets comprise payload, data packets addressed to IP address of mobile unit is disclosed by when mobile host (Figure 7, element 134) is away from home network, home agent (element 132) with foreign agent's internet address for the mobile host intercepts packets and forwards them to foreign agent (element 136) inside of another IP packet (Figure 10). The foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's Internet address. See column 9, lines 61-67, column 10, lines 1-6.

Regarding claim 36, the claimed extracting data packets from redirect packets and communicating data packets to mobile unit is disclosed by foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's internet address. See column 10, lines 1-6.

Regarding claims 38, 44, 50, the communications system comprising a mobile unit having an IP address corresponding to home network is disclosed by mobile host having packets delivered to home network based on internet address. See column 9, lines 61-64. The claimed home agent in home network operable to register foreign agents to receive redirect packets containing information for delivery to mobile units and communicate redirect packets to foreign agents is disclosed by when user roams from one registration area to another, mobile terminal sends a registration request including Internet address of foreign agent to new RPC which sends this request to the associated VLR. VLR sends request to HLR which stores subscription information for keeping track of where mobile terminals are registered and sends service profile

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back to VLR which informs RPC/FA of information to facilitate registration of FA with HA. See Figures 7 and 8 and column 6, lines 28-43, column 9, lines 41-60, column 11, lines 3-28. When mobile host (Figure 7, element 134) is away from home network, home agent (element 132) with foreign agent's internet address for the mobile host intercepts packets and forwards them to foreign agent (element 136) inside of another IP packet (Figure 10). The foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's Internet address. See column 9, lines 61-67, column 10, lines 1-6.

The claimed base transceiver station operable to detect that a mobile station has entered a geographic area associated with base transceiver station is disclosed by mobile host registration sends DRPC registration message to RPC (Figure 1, element 20) each RPC equipped with foreign agent functionality (element 28). See column 5, lines 35-50, column 7, lines 34-60. The claimed determining a home agent for mobile unit based on device identifier such as MIN or ESN is disclosed by database (Figure 2, element 40) storing a list of universal personal telephone numbers of subscribers and also functions to map UPT with corresponding HLR which stores subscription data pertaining to mobile host registration. See column 4, lines 7-13, column 6, lines 39-47, column 8, lines 9-14. The claimed requesting subscription information from home agent, wherein the subscription information comprises an Internet address for the mobile unit is disclosed by RPC has HLR validate user and sends confirmation with user service profile back to new VLR. See column 8, lines 19-37, column 11, lines 3-29. The claimed initiating by base transceiver station, registration of foreign agent with the home agent, wherein the foreign agent is associated with foreign network and wherein the registration permits the foreign agent to receive redirect packets from home agent is disclosed by VLR informs RPC/FA about mobile

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host and provides information such that FA can register with HA. Examiner interprets this as RPC (base station) initiating registration of FA with HA using its own foreign agent functionality. See column 11, lines 17-29.

Regarding claims 39, 45, the claimed foreign agent registers with home agent in advance of establishing data-link layer connection with mobile unit to support a substantially seamless handoff is disclosed by registration of user when they roam from one area to another before packets are communicated so as to have foreign agent receive packets from home agent for transmission to mobile host to provide handover functionality. See column 4, lines 36-45, column 6, lines 28-38, column 8, lines 19-37, column 9, lines 41-67, column 10, lines 1-25.

Regarding claims 40, 47, the claimed generating, with base transceiver station, a registration request comprising IP address of mobile unit and IP address of foreign agent and transmitting registration request to home agent is disclosed by when user roams from one registration area to another, mobile terminal sends a registration request including Internet address of foreign agent to new RPC which sends this request to the associated VLR. VLR sends request to HLR which stores subscription information for keeping track of where mobile terminals are registered and sends service profile back to VLR which informs RPC/FA of information to facilitate registration of FA with HA. See Figures 7 and 8 and column 6, lines 28-43, column 9, lines 41-60, column 11, lines 3-28.

Regarding claims 41-42, 48, the claimed redirect packets addressed to IP address of foreign agent and each of redirect packets comprise payload, data packets addressed to IP address of mobile unit is disclosed by when mobile host (Figure 7, element 134) is away from home network, home agent (element 132) with foreign agent's internet address for the mobile

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host intercepts packets and forwards them to foreign agent (element 136) inside of another IP packet (Figure 10). The foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's Internet address. See column 9, lines 61-67, column 10, lines 1-6.

Regarding claims 43, 49, the claimed extracting data packets from redirect packets and communicating data packets to mobile unit is disclosed by foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's internet address. See column 10, lines 1-6.

Regarding claim 51, the communications system comprising a mobile unit having an IP address corresponding to home network is disclosed by mobile host having packets delivered to home network based on Internet address. See column 9, lines 61-64. The claimed home agent in home network operable to register foreign agents to receive redirect packets containing information for delivery to mobile units and communicate redirect packets to foreign agents is disclosed by when user roams from one registration area to another, mobile terminal sends a registration request including Internet address of foreign agent to new RPC which sends this request to the associated VLR. VLR sends request to HLR which stores subscription information for keeping track of where mobile terminals are registered and sends service profile back to VLR which informs RPC/FA of information to facilitate registration of FA with HA. See Figures 7 and 8 and column 6, lines 28-43, column 9, lines 41-60, column 11, lines 3-28. When mobile host (Figure 7, element 134) is away from home network, home agent (element 132) with foreign agent's internet address for the mobile host intercepts packets and forwards them to foreign agent (element 136) inside of another IP packet (Figure 10). The foreign agent

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upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's Internet address. See column 9, lines 61-67, column 10, lines 1-6.

The claimed base transceiver station operable to detect that a mobile station has entered a geographic area associated with base transceiver station is disclosed by mobile host registration sends DRPC registration message to RPC (Figure 1, element 20) each RPC equipped with foreign agent functionality (element 28). See column 5, lines 35-50, column 7, lines 34-60. The claimed determining a home agent for mobile unit based on device identifier such as MIN or ESN is disclosed by database (Figure 2, element 40) storing a list of universal personal telephone numbers of subscribers and also functions to map UPT with corresponding HLR which stores subscription data pertaining to mobile host registration. See column 4, lines 7-13, column 6, lines 39-47, column 8, lines 9-14. The claimed requesting subscription information from home agent, wherein the subscription information comprises an Internet address for the mobile unit is disclosed by RPC has HLR validate user and sends confirmation with user service profile back to new VLR. See column 8, lines 19-37, column 11, lines 3-29. The claimed initiating by base transceiver station, registration of foreign agent with the home agent, wherein the foreign agent is associated with foreign network and wherein the registration permits the foreign agent to receive redirect packets from home agent is disclosed by VLR informs RPC/FA about mobile host and provides information such that FA can register with HA. Examiner interprets this as RPC (base station) initiating registration of FA with HA using its own foreign agent functionality. See column 11, lines 17-29.

Regarding claim 52, the claimed means for receiving redirect packets in advance of establishing data-link layer connection with mobile unit to support a substantially seamless

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handoff is disclosed by registration of user when they roam from one area to another before packets are communicated so as to have foreign agent receive packets from home agent for transmission to mobile host to provide handover functionality. See column 4, lines 36-45, column 6, lines 28-38, column 8, lines 19-37, column 9, lines 41-67, column 10, lines 1-25.

Regarding claim 53, the claimed generating, with base transceiver station, a registration request comprising IP address of mobile unit and IP address of foreign agent and transmitting registration request to home agent is disclosed by when user roams from one registration area to another, mobile terminal sends a registration request including Internet address of foreign agent to new RPC which sends this request to the associated VLR. VLR sends request to HLR which stores subscription information for keeping track of where mobile terminals are registered and sends service profile back to VLR which informs RPC/FA of information to facilitate registration of FA with HA. See Figures 7 and 8 and column 6, lines 28-43, column 9, lines 41-60, column 11, lines 3-28.

Regarding claim 54, the claimed redirect packets addressed to IP address of foreign agent and each of redirect packets comprise payload, data packets addressed to IP address of mobile unit is disclosed by when mobile host (Figure 7, element 134) is away from home network, home agent (element 132) with foreign agent's internet address for the mobile host intercepts packets and forwards them to foreign agent (element 136) inside of another IP packet (Figure 10). The foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's Internet address. See column 9, lines 61-67, column 10, lines 1-6.

Regarding claim 55, the claimed extracting data packets from redirect packets and communicating data packets to mobile unit is disclosed by foreign agent upon receipt of

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encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's internet address. See column 10, lines 1-6.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 56-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penners et al.

Penners et al. disclose step of detecting at a base station transceiver, that a mobile station has entered a geographic area associated with base transceiver station is disclosed by mobile host registration sends DRPC registration message to RPC (Figure 1, element 20) each RPC equipped with foreign agent functionality (element 28). See column 5, lines 35-50, column 7, lines 34-60. The claimed step of determining a home agent for mobile unit based on device identifier such as

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MIN or ESN is disclosed by database (Figure 2, element 40) storing a list of universal personal telephone numbers of subscribers and also functions to map UPT with corresponding HLR which stores subscription data pertaining to mobile host registration. See column 4, lines 7-13, column 6, lines 39-47, column 8, lines 9-14. The claimed step of requesting subscription information from home agent, wherein the subscription information comprises an Internet address for the mobile unit is disclosed by RPC has HLR validate user and sends confirmation with user service profile back to new VLR. See column 8, lines 19-37, column 11, lines 3-29. The claimed step of initiating by base transceiver station, registration of foreign agent with the home agent, wherein the foreign agent is associated with foreign network and wherein the registration permits the foreign agent to receive redirect packets from home agent is disclosed by VLR informs RPC/FA about mobile host and provides information such that FA can register with HA. Examiner interprets this as RPC (base station) initiating registration of FA with HA using its own foreign agent functionality. See column 11, lines 17-29.

Regarding claim 57, the claimed receiving redirect packets in advance of establishing data-link layer connection with mobile unit to support a substantially seamless handoff is disclosed by registration of user when they roam from one area to another before packets are communicated so as to have foreign agent receive packets from home agent for transmission to mobile host to provide handover functionality. See column 4, lines 36-45, column 6, lines 28-38, column 8, lines 19-37, column 9, lines 41-67, column 10, lines 1-25.

Regarding claim 58, the claimed generating, with base transceiver station, a registration request comprising IP address of mobile unit and IP address of foreign agent and transmitting registration request to home agent is disclosed by when user roams from one registration area to

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another, mobile terminal sends a registration request including Internet address of foreign agent to new RPC which sends this request to the associated VLR. VLR sends request to HLR which stores subscription information for keeping track of where mobile terminals are registered and sends service profile back to VLR which informs RPC/FA of information to facilitate registration of FA with HA. See Figures 7 and 8 and column 6, lines 28-43, column 9, lines 41-60, column 11, lines 3-28.

Regarding claim 59, the claimed redirect packets addressed to IP address of foreign agent and each of redirect packets comprise payload, data packets addressed to IP address of mobile unit is disclosed by when mobile host (Figure 7, element 134) is away from home network, home agent (element 132) with foreign agent's internet address for the mobile host intercepts packets and forwards them to foreign agent (element 136) inside of another IP packet (Figure 10). The foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's Internet address. See column 9, lines 61-67, column 10, lines 1-6.

Regarding claim 60, the claimed extracting data packets from redirect packets and communicating data packets to mobile unit is disclosed by foreign agent upon receipt of encapsulated packet, unwraps it and forwards it to mobile host based on mobile host's internet address. See column 10, lines 1-6.

However, Penners et al. does not disclose logic for supporting data communication operable to perform the steps disclosed above. At the time the invention was made it would have been obvious to translate these steps into logic for use by the RPC/FA of Penners et al. One of ordinary skill in the art would be motivated to do this for the efficiency due to an automated system.

Response to Arguments

5. Applicant's arguments with respect to claims 31-60 have been considered but are moot in view of the new ground(s) of rejection.

Examiner appreciates Applicant's canceling of claims 1-30 for the purposes of expediting prosecution.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 571-272-3163. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ

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FRANK DUONG
PRIMARY EXAMINER